



Center Director Chris Kraft brings his work to the control room; controllers monitor the space station through the night. George Abbey and Charles Harlan chart the entry course, and Don Puddy talks over the maneuver with Harlan. Team effort and hard work brought Skylab in.

ROUNDUP

Lyndon B. Johnson
Space Center

NASA

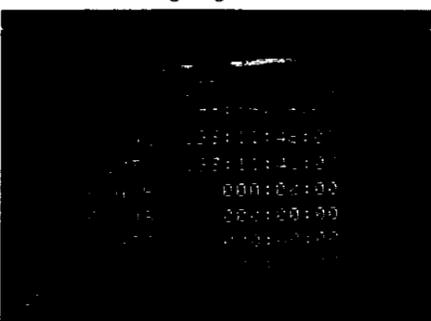
July 27, 1979 Houston, Texas

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'No more suspense; Skylab is on Earth'

"Load mark one zero six two," Mike Hawes spoke on the loop to the Santiago, Chile, tracking station workers, and final commands were uplinked to Skylab.

Then controllers waited for the next pass to see if the controlled tumble maneuver was going to work.



A console the day after

At 3:19 a.m. July 11, the space station passed over Madrid. Commands were uplinked to turn off the control moment gyros—the last commands to be sent to the station. Data came back showing that Skylab was performing as predicted.

Flight controllers' voices noticeably relaxed.

The maneuver essentially turned off the space station causing it to tumble at a time controllers chose, rather than a random tumble with no control over the location of impact.

Just before midnight it was clear at which revolution Skylab would reach 75 statute miles altitude, the time controllers predicted the vehicle would start to break up and fall to Earth.

It looked like an uncontrolled reentry could have put the impact point over

populated areas of the North American continent.

The decision to control reentry was made over a loop connecting management at JSC with Headquarters and Marshall. The maneuver would allow the station to remain intact until it reached the Atlantic Ocean. Then the breakup and "footprint," the predicted 4,000-mile-long trail of debris, should have gone around the southern tip of Africa with the final, largest pieces ending up in the Indian Ocean.

Controllers continued to monitor telemetry coming from the space station. The three TV networks and 200 news representatives watched monitors in the second floor control room and in a press area in Building 2. Radio and newspaper reporters from around the world kept all

10 lines in the JSC Newsroom ringing continuously.

Voices became even more relaxed as the space station cleared the North American continent at 10:40.

Then worry returned to the voices on the loops and in the news. At 10:58 a.m., with Skylab well into its revolution over the Atlantic, the space station remained intact.

The batteries had heated to over 100 degrees, the station was below 75 statute miles, but the solar panels were still attached. Skylab was not falling apart.

At 11:03, over the Ascension Island pass, controllers reported they were

Continued on Page 4

Carter on faith in technology

The following is an excerpt from President Carter's speech on energy Sunday July 15.

We are the same Americans who just 10 years ago put a man on the Moon. And we are the generation that will win the war with the energy problem, and in that process rebuild the unity and confidence of America.

We have the world's highest level of technology. We have the most skilled workforce, with innovative genius. And I firmly believe that we have the national will to win this war.

We are facing a crisis of confidence. The erosion of our confidence in the future threatens to destroy the social and political fabric of America.

Confidence has defined our course and served as the link between generations. We've always believed in something called progress. We've always had a faith that the days of our children would be better than our own.

(From the Houston Chronicle editorials, July 20.)

"If we were a people that gave in to doubts, the Eagle would never have landed on July 20, 1969."

JSC scientists take part in joint US/USSR study

Four JSC scientists will be working with Soviet doctors at Ames Research Center in California on the first joint U.S./U.S.S.R. space medicine study, bedrest tests that began July 11 and will run through August.

Carter Alexander will do cardiovascular monitoring during stress tests with the 10 subjects. Stephen Kimzey is responsible for hematology and radioisotope studies—blood tests. Carolyn Leach Hutton will be working biochemistry and Malcolm Smith is responsible for the test subjects' nutrition.

Alexander is project manager for the U.S. phase of the study

Goal of the joint study is to help standardize techniques used to analyze the adaptation of cosmonauts and astronauts to space. In October the U.S. and Soviet teams will meet to discuss results of the study and talk about future collaborative efforts.

Extended bedrest is one way to simulate effects weightlessness has on the body. Five of the subjects will remain horizontal in a total bedrest condition; the other five will be in a position with their heads lowered six degrees from the horizontal.

Continued on Page 3

A chapter ends and it's the Shuttle again

Sims back on schedule



Don Puddy prepares for entry simulations

Thursday afternoon. The Skylab is down, the news crews are packed and gone on to the next breaking story.

By 11 a.m. an entry simulation crew is in Mission Control Center getting ready to start a training exercise. The Center is back on a normal schedule less than 12 hours after Skylab's fall.

"We were going to do the last six hours of deorbit and reentry," said Flight Director Don Puddy. "We had to switch plans because it took most of the morning to clear out the TV equipment."

So by noon a limited flight control

crew began running ground control approach simulations. Trainers in Building 5 fed navigation or energy problems into the simulators so controllers could run through procedures should an orbiter's approach and landing have to be handled from the ground.

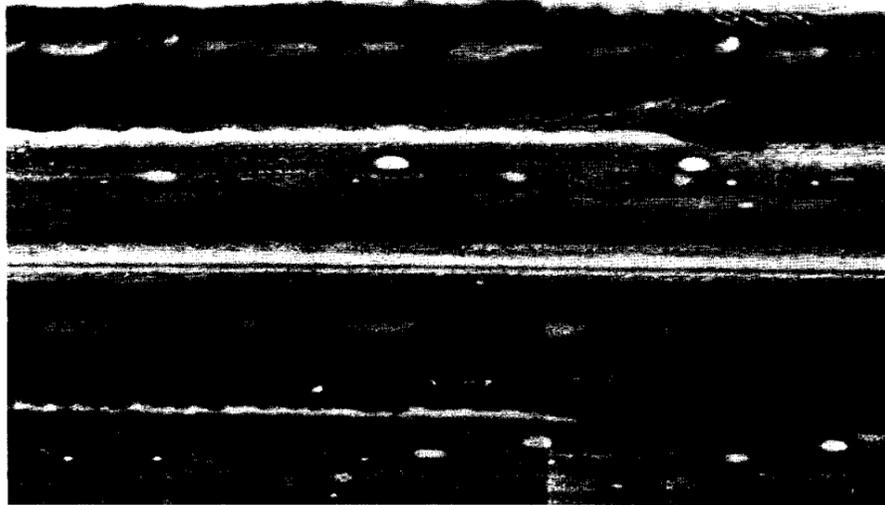
"We ran several sims going from 180,000 feet to the ground," Puddy said. "It was a good training exercise."

Shuttle mission simulations will continue to take place every Tuesday and Thursday in the second floor control room, training ground and flight crews from now until next year's launch.



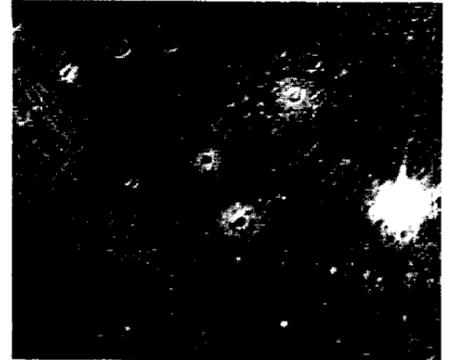
Ten-hour time lapse of Io monitors active volcanos.

Voyager Two eyes Jupiter



V-One photo (top) alligned with V-Two shot (below) shows red spot has moved westward since March.

Intricate mosaic, Sistine rival,
Painted with electron brushes
By men who talk to Time,
All the Earth's great furies
And mighty maelstroms
That battered Erik,
Tried to turn Columbus back,
And sent Magellan down,
Are but a wisp
To these articulate Jovian swirls.
—Ed Rainey, CG3



July closeup of Ganymede

Bulletin Board

Please limit announcements to 10 lines, double-spaced copy

Air Force Institute of Technology Wants to Hear from Alumni

The Air Force Institute of Technology will celebrate its 60th anniversary this year and is trying to contact alumni of AFIT-sponsored degree programs, both resident and at civilian institutions. The celebration is scheduled for November 16 and 17. Alumni of AFIT who have not received mail concerning the anniversary should send their home mailing address to AFIT/RRDS, Wright-Patterson AFB, Ohio 45433. AFIT would also like to know of alumni who have authored books, received professional acclaim, achieved positions of prominence, or otherwise distinguished themselves.

Still Time to Catch Summer Faculty Seminars

This year 23 college professors from Engineering/Space Sciences disciplines are at JSC doing research projects for 10 weeks as part of NASA's Summer Faculty Fellowship Program, now in its fifteenth year. Part of the program is a series of seminars, to which all onsite employees are invited. Wednesday August 1 Michael Duke will speak on Planetary and Earth Sciences in the Building 31 Conference Room. Wednesday August 8 Jon Erickson will speak on the Earth Observations Program in the Building 17 Conference Room. Seminars begin at 9 a.m. Call Marilyn Stovall at x-2170 for further information.

JSC Flying Club Seeking New Applicants

The JSC Flying Club is seeking new applicants, and student pilots are welcome. Next meeting is August 2 at 7 p.m. in Gilruth Center, room to be decided. Contact John Rector at x-5123 or Joe Pineda at x-5012 for further information.

On Sale at the JSC Exchange Store

(Store Hours 10:00 am to 2:00 pm)

Dean Goss tickets - \$10 single
\$20 couple (Reg. \$14.50)
ABC Theatre tickets - \$2 each
General Cinema tickets - \$2.40 each
Six Flags Over Texas tickets
\$7.25 for one day (Reg. \$9.25)
\$9.25 for two days (Reg. \$13.95)
Astroworld tickets - \$7.25 (Reg. \$9.25)
Magic Kingdom Cards - Free
Sea-Arama Marineworld Fun-Time Card - Free

Is the Running Being Run The Way You Want It To Be Run?

A proposed layout for the Gilruth Rec Center jogging trail has been submitted by the architect and is posted in the GRC gym for review and comments. The proposed six-foot width trail has an asphalt surface for low maintenance and all-weather use and contains half-mile and one-mile loops. All joggers and runners are requested to submit comments to Rick Barton, x-5181, Code EX4, by August 3.

Disco, Country/Western And Ballroom Lessons Offered

The JSC Dance Club is sponsoring a six-week Disco and a four-week Country and Western Dance Lesson Session at the Gilruth Center starting September 11. Disco lessons, with instructor Alice Bass, begin at 7 p.m. followed by the C&W lessons at 8:30 with instructors Rex and Eileen Bauerline. Cost of the Disco lessons is \$30 per couple; C&W lessons cost is \$10 per couple. A 10-week ballroom session begins on September 12. Classes are at 6:45 and 8:15 p.m. with instructors Bob and Rae Calvert.

Special honors and awards

Anne L. Accola, Aerospace Engineer in Crew Training, has been selected unanimously to receive a **Special Achievement Award** by the Houston Area Federal Women Employees Managers Council. As team leader for Shuttle Mission Simulator Team One, Accola has played a major role in developing new flight training concepts, and she was nominated for the award as an "outstanding engineer."

The fifth group of participants for **Project Increased Qualifications (IQ)** has been selected by the Employee Development Branch. Chosen for the college study program were **Patricia A. Daniel, Frances M. Gentry, Marilyn W. Kimball, Charlotte Lawrence, Geraldine B. Mason, Herbert E. Noakes, Jr., Demaris C. Reid, Gualalupe Rios, Norma J. Walker, and Thelma B. Williams**. Project IQ was designed to allow selected employees to enroll

in one or two college courses during duty hours for four semesters. Stan Goldstein, Chief of Employee Development, says the program has been successful and he expects it to be offered annually.

Dr. Andrew E. Potter, of the Environmental Effects Office at JSC, was honored for "**the most outstanding article**" to appear in the Journal of Environmental Sciences in 1978 by the Institute of Environmental Sciences Technical Editors. The article was titled, "Environmental Effects of the Space Shuttle." The technical editors judge the article and determine the recipient of this award by the technical quality, scope, and achievement; relevance to the IES membership, sponsors, and organization objectives; freshness of topic and approach; potential impact in its field; and contribution to IES image and prestige.

Cost of the ballroom series is \$40 per couple. For further information on Dance Classes, contact Lylye Jiongo, x-3445.

Model Rocket Nationals To Be at JSC August 5 - 11

The 21st National Association of Rocketry Annual Championship Meet (NARAM-21) will be held August 5-11 at JSC. The public is invited to attend the 200-300 model rocket flights per day, model rocket manufacturer demonstration launches, evening discussion sessions, a static Space Shuttle model contest, and other activities. Launch site is a half mile west of Rocket Park on

Saturn Drive, toward the Credit Union. For further information contact Bob Justis at 333-3132 after 5:30 p.m.

Computer Hobbyists to Discuss Microprogramming and Bit Slices

The JSC Computer Hobbyist Club will hold its regular meeting in Room 209 of the Gilruth Center at 5 p.m. August 2. Ned Yelverton of IBM will present a tutorial discussion of microprogramming with applications to popular bit slice microprocessors. The club meets the first Thursday and third Monday of each month. Meetings are open to anyone interested in personal computers.

Speeding and idling, ways to save fuel

To be read while sitting at a gas line

The American Automobile Association offers this advice to drivers on ways to improve fuel efficiency.

Driving habits: Pace yourself to reach stoplights as they turn green rather than coming to a halt and starting again; avoid rapid acceleration and braking which eat up gas.

Air Conditioning: If your car has one, you may save gas by using an air conditioner during high-speed travel. The drag created by driving 55 mph

with windows open often takes more fuel than the air conditioner. However, in stop-and-go traffic an air conditioner can add 5 to 14% to a car's fuel bill.

Regular Tuneups: Tests by the AAA and others show that even minor tuneups done at least twice a year can improve mileage by 9 to 15%.

Tire Pressure: Underinflated tires cause the motor to work harder and thus burn more gas.

Service-station lines: If you're waiting long periods of time in line for gasoline, don't keep your motor running. Idling for more than a minute wastes more gas than it takes to restart the engine.

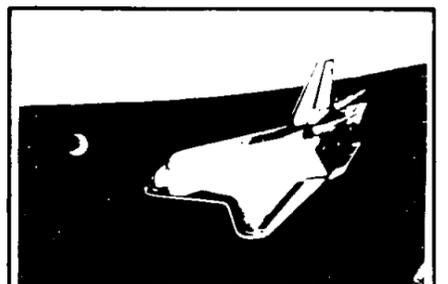
Roundup deadline is the first Wednesday after publication.

NEBA Facts

In 1859 New York State established the first insurance department.

In 1861 the first war risk insurance was written by life companies in the Civil War.

In 1969 the U.S. Supreme Court held insurance not to be a transaction in commerce, and affirmed the validity of state regulation of insurance.



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Writer/Editor: Kay Ebeling

What's cookin' in the JSC cafeteria

Week of July 30 - August 3

MONDAY: Cream of Chicken Soup; Beef Burgandy over Noodles; Fried Chicken; BBQ Sausage Link; Hamburger Steak (Special); Buttered Corn; Carrots; Green Beans. Standard Daily Items: Roast Beef; Baked Ham; Fried Chicken; Fried Fish; Chopped Sirloin. Selection of Salads, Sandwiches and Pies.

TUESDAY: Beef Noodle Soup; Baked Meatloaf; Liver w/Onions; BBQ Spare Ribs; Turkey & Dressing (Special); Spanish Rice; Broccoli; Buttered Squash.

WEDNESDAY: Clam Chowder; Broiled Fish; Tamales w/Chili; 8 oz T Bone Steak; Spanish Macaroni (Special); Ranch Beans; Beets; Parsley Potatoes.

THURSDAY: Navy Bean Soup; Beef Pot Roast; Shrimp Chop Suey; Pork Chops; Chicken Fried Steak (Special); Carrots; Cabbage; Green Beans.

FRIDAY: Seafood Gumbo; Broiled Halibut; Fried Shrimp; Baked Ham; Tuna & Noodle Casserole (Special); Corn; Turnip Greens; Stewed Tomatoes.

Week of August 6 - 10

MONDAY: Chicken Noodle Soup; Weiners & Beans; Round Steak w/Hash browns; Meatballs & Spaghetti (Special); Okra & Tomatoes; Carrots; Whipped Potatoes. Standard Daily Items: Roast Beef; Baked Ham; Fried Chicken; Fried Fish; Chopped Sirloin. Selection of Salads, Sandwiches and Pies.

TUESDAY: Beef & Barley Soup; Beef Stew; Shrimp Creole; Fried Chicken (Special); Stewed Tomatoes; Mixed Vegetables; Broccoli.

WEDNESDAY: Mushroom Soup; 8 oz T Bone Steak; Fried Perch; New England Dinner; Swiss Steak (Special); Italian Green Beans; Cabbage; Carrots.

THURSDAY: Cream of Chicken Soup; Turkey & Dressing; Enchiladas w/Chili; Weiners & Macaroni; Stuffed Bell Pepper (Special); Zucchini Squash; English Peas; Rice.

FRIDAY: Seafood Gumbo; Baked Flounder; 1/4 Broiled Chicken w/Peach half; Salisbury Steak (Special); Cauliflower au gratin; Mixed Vegetables; Whipped Potatoes; Buttered Cabbage.

Joint US/USSR study

Continued from Page 1

Soviet scientists in recent years have abandoned the horizontal position in favor of studying subjects at varying degrees of head-down tilt. The joint study should determine which position is more effective.

The experiment will last five weeks, with two weeks of controlled observations, one week of bedrest, and two weeks of post-bedrest measurements.

Members of the U.S. team include university scientists, Ames scientists, JSC scientists, and contractors from both

NASA centers.

The two Soviet scientists, both medical doctors, are Valeriy Mikhailov, project manager for the Soviet phase of the study, and Anatole Grigoriev, a principal researcher for the project.

The project was established two years ago under the auspices of the joint U.S./U.S.S.R. Working Group on Space Biology and Medicine. Dr. Gerald Soffen, NASA Director of Life Sciences, and Dr. N. N. Gurovsky of the U.S.S.R. Ministry of Health, are co-chairing.

June's secretary stays busy working two jobs at once

An ability to turn out volumes of work under what could be called burdensome conditions has earned Rachel Windham the Outstanding Secretary award for June.

Windham is secretary to the Manager, Operational Planning Office for the Space Shuttle Program, but for the past eight months she has also served on a detailee basis as the private secretary to the Manager for Operations Integration—two jobs at once.

Office spokesmen say she accomplishes this feat by working out of two separate offices for extended periods of time. Circumstances often require that she move between offices several times during a week.

"She does this without complaint or fluster," the spokesmen say.

She also has a unique ability to analyze the operations of her assigned office and identify methods to make the workflow more efficient. She can judge relative priorities so that urgent actions are accomplished first "but the general flow of essential support functions is also maintained," spokesmen say.

"She handles an unusually heavy workload," they add.

Windham works at improving her professional performance by taking Employee Development courses. "Much in her favor is the fact that she applies the training from these courses in the



Rachel Windham
Outstanding Secretary

performance of her duties, and carefully analyzes the course to insure that it meets a need that she or her supervisor can identify," office spokesmen say.

In addition, Windham is an officer in the National Secretaries Association (International).

Roundup Swap Shop

Ads should be under 20 words, double spaced, typed or printed, one ad per person. Deadline for submitting or cancelling ads is 5:00 p.m. the first Wednesday after publication. Send ads to AP3 Roundup, or deliver them to the Newsroom, Building 2 annex. No phone-ins, please. Swap Shop is open to JSC federal and on-site contractor employees for non-commercial personal ads. Goods or services must be offered as advertised without regard to race, religion, sex, or national origin.

Musical Instruments

12-string Ovation guitar, exc cond. 488-2613.

Electric organ, Yamaha, 3 keyboards, exc cond, \$1000. 944-5818.

Electric guitar, Ovation Preacher, great cond, \$225. Perry 946-7011.

Wanted

Persons to form a daily bicycle caravan from the Sagemont area to JSC (safety in numbers) and to help in establishing bicycle lanes or routes. Morris x5293 or 481-3900.

1.5 or 2.0 cu ft. small refrigerator. J. Stoker x6301.

Reasonably priced, 15 ft. aluminum canoe. John 946-1965.

115 hp OMC outboard and sub compact car. Will trade land of equal or greater value for either. T. Ward x2651 or 488-5445.

Cycles

78 YZ 250 bought in April, never raced, great cond, never wrecked, \$1400. Comes with glove and other accessories. Craig 334-1628.

Property & Rentals

Sale: CLC, Freshly painted 3-2-2 on large treed corner lot. Prime Oakbrook location, low utilities. 488-0971.

Sale: 1 acre waterfront wooded lot at Lake Sam Rayburn, white sand beach 1/2 mile by water to Shurley Creek Marina (\$15,000). Gene Krause 332-4865 after 5:30.

Resort lot 90 x 150 in Lakeway on Lake Travis. Owner will finance \$17,500. Adjacent to private landing strip. 334-3396 after 5.

No gas attacks! Vacation on the Gulf at Bolivar Beach, exc fishing. Cottage \$35 daily or \$195 week, family only. Horton x3734.

Rent: Beautiful 2 bdrm apartment on 9th floor of Galveston beachfront hi-rise condo. Completely furnished, cable TV, tennis, pool, \$55/day, \$285/week, 488-4276.

Lake Livingston retreat, completely furnished, beautiful wooded lot on the water. Rent by day or week, etc. 554-6093.

Lease: Middlebrook, 3-2-2, fireplace, wet-bar and fenced, icebox if necessary, \$500/month. Tom x2631 or 488-4444.

Lease: 3-2-2, Dickinson, refrig, drapes, fireplace, fenced. First, last, deposit, \$410/month. 534-4929.

Rent waterfront vacation retreat by marina at Cape Royale on Lake Livingston new 3 bdrm, tennis, pool, golf, boat launch, by week. 488-3746.

Vacation Lake Livingston Cape Royale. Enjoy charming custom 3-2-1, compl. furn home nestled among trees by the water, rent by wk/mo/hr. 488-4487.

Miscellaneous

GE Superblow hair dryer, brand new, 486-5116 after 5.

Girls 20" Shwinn "My Fair Lady" bicycle, yellow, very good cond, \$35. 481-2535.

IBM office typewriter, completely reconditioned, looks new, \$235. Have model B and C, will sell one. x2761 or 482-7698.

4-24" doors, 3 paneled with frames, hinges, \$20 each. 1 hollow core, \$5. 334-3370.

Fresh local honey. Pints \$1.75, Quarts, \$3, Gallons \$11. Ward x 4976.

5hp riding lawnmower (Wards) needs new battery, \$150. Boles x2305 or 471-3709.

Complete basketball goal, 14' offset H.W. 5" pipe, backboard, rim and net, exc cond, \$100. John 946-1965.

Radio tower, Rohn, 40 foot in 4 sections, hinged base, antenna rotor and control. Eggleston 482-4239.

Philatelist disposing plate block collection at half of Scott value. Over \$1000. Dates back to 1940's. Jeff x7429.

36 lb pull target, bow and case \$40. 488-2613.

Colt combat commander, 7-mm, never fired, two boxes ammo, \$300 firm. Chris x3220.

Scott motorcycle boots, medium, 3 months old, fits sizes 8-10, \$170. Air hockey table, 5', exc cond, \$80 or best offer. Craig 334-1628.

Tire B78-13 less than 1000 miles wear, \$19. Fred 333-6574.

Boats & Planes

20' Sea Ray 188 hp O.D. 1975. exc cond, low time and top performance, 333-3519.

Sailboat, 1978 Capri-Cyclone 13 with trailer, good cond, \$2000-negotiable. 627-1310 x 177.

78 Glastron, 18' with 115 hp Johnson with power tilt and trim. Exc cond with very low hours. Perfect skiing and fishing rig. 946-8788.

Household

Hospital bed with nearly new mattress (never used by a sick person), \$100. Two sets half-bed frames, \$5/set. Large formica table \$15. Holley x3616.

Baby crib w/mattress, \$30. Baby Swingomatic w/car bed, \$15. Both exc cond. Cindy x7236 or 944-4896.

Gold carpet \$30; drapes, sheets 6 x 121 - \$20 ea; patio drapes \$8 ea + hardware \$10 ea. Single mattress \$10; orange sofas w/corner table \$50; 485-7436 eves.

Pets

Free puppy, black and brown, female, 10 weeks old, will be small dog. Musgrove 488-3966.

Reluctantly must find new, loving home for beautiful female black and rust Doberman, AKC and pedigree papers. Karen, 474-3406 (days) or x2691 (nights).

American "pit bull" puppies (8 weeks), 4 females, 3 males, females \$100 males \$150. UKC reg. 477-3449.

Cars & Trucks

48 Chrysler Windsor, 2-dr, exc cond inside and out, hydramatic drive, runs good, \$1900. 486-1151 after 6.

68 2-dr Cadillac, all power, new tires and battery, Holley econo-carb, exc cond, \$795. Chuck Sr. 487-2978.

307/V-8, Chev, engine, good cond, good mileage. Greg 332-4732 after 6.

73 GMC PU, \$800. 946-5849 after 5.

77 Lincoln Continental Town Coupe, all extras except moon roof, cassette stereo. Only 30,000 miles, perfect cond, \$8000. Mandell 334-1982.

76 red Pinto, good cond, AM/FM/CB radio, A/C, work number 488-2401 and on weekends call 935-2371 and ask for Cora Alvarado.

76 Ford PU, 3/4 ton, 7800 GVW, camper Pkg, fully loaded, 460 V-8, 15 mpg, \$5000. 488-3663.

70 Mercury Colony Park wagon. 488-6095.

Mini motor home. 76-7 Itasca 25', all extras, only 10,800 miles, 9.5 mpg towing a car and running 4kw gen. \$15,300 (trade possible). 334-1303 after 5.

77 Monte Carlo, 25K miles, very good cond. 488-2613.

74 Pontiac Ventura, std. transmission, power and air, good cond, \$1250. 554-6039.

77 Olds Cutlass Salon, exc cond, loaded, 30,000 mi. 488-0010 after 5.

1976 Plymouth Fury. Exc shape AM/FM. \$2850. Boles x-2605 or 471-3709.

77 Datsun 810 Sedan w/Maroon padded vinyl top, automatic, AM/FM stereo. Extended transferrable warranty; low mileage. \$4800. W. Jones x-2796 or 488-8119 after 5.

Carpools

Need a 4th carpooler from the Gulf Fwy/Edgebrook area to JSC from 7:30-4:15. Ron x3526 or Roger x2764.

Someone to carpool with between Stirling Knoll and JSC. John x5212 or 486-8938 after 4.

Want carpool from area west or south of Gulfgate to JSC. Nonsmokers only, please. Bill Crosier x5056.

Carpool, Friendswood/Sunmeadow to NASA (Bldg 30 area), preferred hours 7:30-4. Max Kilbourn x4401.

Looking for carpool from Deer Park to JSC, 8-4:30. Jean Scott x5771 or x5524.

Need additional carpoolers from West Loop, Bellaire, Meyerland area, 8-4:30. McLaughlan x5536.

Opening for 4th person to carpool from Edgebrook and Allen Genoa to JSC, 8:30-5. Rign x5131 or Gladys x3925.

Wanted to join or form carpool Dickinson to Site, 8-4:30 or 8:30-5. Harry x6479 or 337-4063.

Would like to form or join a carpool from Northwood Manor area, 8-4:30. Vivian x2946 or 449-0115.

Form or join carpool to Alvin, 7:30-4. Ernie x4949.

Need 1 or 2 nonsmoking carpool members for Wayside/Long Point/Target/610 loop area, 8-4:30. Janice or Helen x5447.

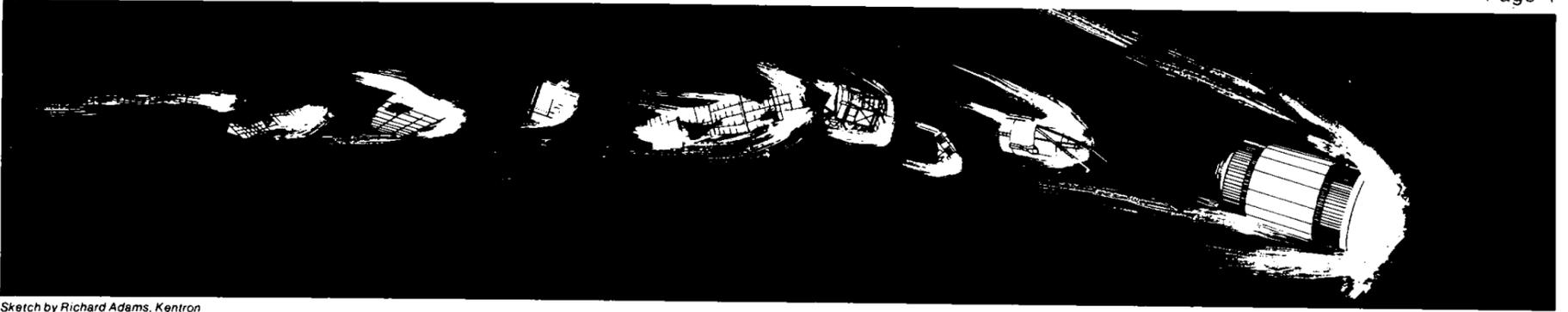
Need one non-smoking carpool member from Edgebrook and Theta area. 7:30 - 4:00 shift. Gardner x-4721 or 944-5615.

WHEN A GOOD
COST REDUCTION IDEA
STRIKES



PUT IT ON JSC FORM 1150 AND
SEND IT TO . . .
COST REDUCTION OFFICE BG-3

Cartoon by Russ Byther



Sketch by Richard Adams, Kentron

'From a blue glow to orangey red'

Captain Bill Anderson, Australian pilot, described his sighting of Skylab's reentry to flight controllers in Building 30, July 11.

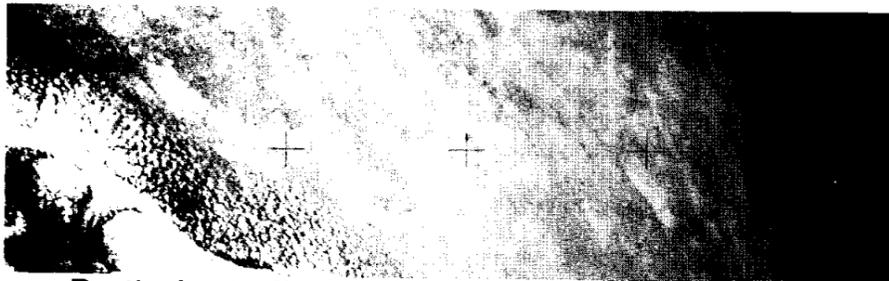
"We saw what we believe was the reentry of your Skylab. We were approximately 130 miles northeast of Perth at 29,000 feet. We originally saw the vehicle at about 11 o'clock to

our aircraft and about five degrees above us. It appeared initially to us as a large aircraft with all its lights on—in other words this big blue glow almost like aircraft headlights. As it descended further it was apparent that it was changing from the blue to an orangey-red. You could see the breakup starting to occur. It finished up in five very bright orange balls in

the front and the remainder of the debris behind giving off sparks. You could almost depict the middle falling down to earth. At the finish, the trail was very long, perhaps several hundred miles off. It's hard to estimate because we don't know the distance. It went from about five degrees above us down to where we lost sight of it."



Kraft, Harlan talk to pilot



Perth, Australia, as photographed by Skylab Four

The lights of Perth remembered

During the Mercury missions, the first manned orbital flights, the city of Perth, Australia, would turn on its lights for the astronauts passing overhead. Now, 18 years later, the last remnants of Skylab debris fell in a display of lights over the same part of the world. Following are excerpts from the Mercury mission transcripts concerning the lights of Perth, Australia.

CC: Roger, Faith Seven. People here will be glad to hear that.

P: Roger. Looks good.

(Second pass)

CC: Do you have the Perth lights in sight?
P: Negative, I'm upside down. I can't see them.

(Fourteenth pass)

P: I am observing lights of several small cities and scattered areas on the ground. Apparently over the east coast of Australia.

(Seventeenth pass)

CC: Faith Seven. We have a message for you.

P: Roger

CC: From the Australian Minister of Supply, the Honorable Alan Fairhall: "All Australia following your progress with lively interest. Muchea and Red Lake tracking station staffs and Department of Supply are proud to be associated with this great NASA effort. Happy landings." End message.

P: Roger. Thank you very much.

The Skylab story concluded

Continued from Page 1

finally "gradually losing telemetry signals," an indication that the vehicle was breaking apart.

The footprint started in the Indian Ocean, with large pieces of debris coming in over the southwest coast of Australia. There were reports of sightings, in the Australian night sky, but no reports of damage or injury.

By noon, NORAD reported they were no longer picking up traces of Skylab on radar.

"The surprise is over. No more suspense," Charles Harlan, Skylab Flight Director, said two hours later in a

crowded press conference. "Skylab is on the planet Earth.

"We were gratified that the reentry orbit was going to be Number 34,981," he continued. "We could not have chosen a better orbit from a human hazard standpoint."

He added that if the Skylab were aiming for a more populated area, controllers would have modulated the drag to select an entry orbit. Number 34,981 would probably be the revolution controllers would have chosen for reentry.

"Faced with the same data, we'd have made the same decision," Harlan said. "We were very lucky."

Mercury Atlas 6, Pilot John Glenn

P: I have the lights in sight on the ground. Just to my right I can see a big pattern of lights apparently right on the coast. I can see the outline of a town and a very bright light just to the south of it.

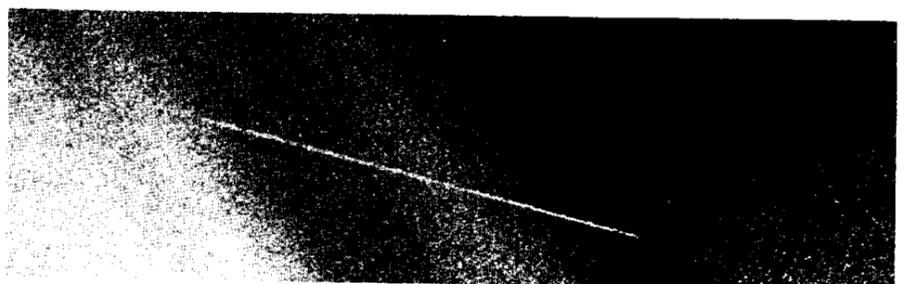
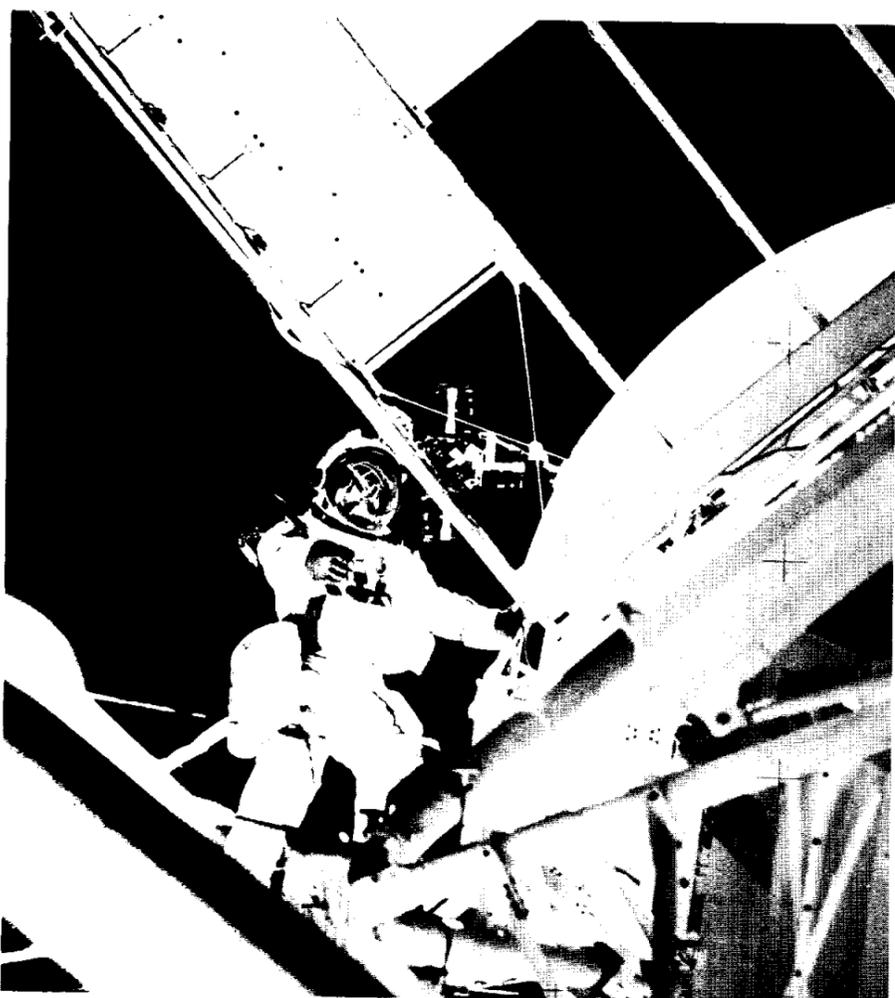
CC: Perth and Rockingham, you're seeing there.

P: Roger. The lights show up very well and thank everybody for turning them on, will you?

CC: We sure will, John.

Mercury Atlas 9, Pilot Gordon Cooper (first pass)

P: I have the lights of Perth in sight. Loud and clear.



Skylab crosses the Houston sky on its last orbit over the U.S. Shot with time exposure by Paul Maley.

At left, Owen Garriott performs an extra vehicular activity at the Apollo Telescope Mount during Skylab Three. Skylab was "the transition from man's being a traveler in space to being an inhabitant of space," said Gerald Carr, Commander of Skylab Four, Carr was an AIAA speaker onsite during Space Week July 16-20. Skylab missions showed that a person can adapt to space after around 20 days, "as long as you maintain some element of control over the changes taking place," Carr said, such as an hour and a half a day of exercise. Skylab tasks included studies of the Sun and the Earth's environment. "They are still perusing data, and it will be a few more years before they are finished, with the data from Skylab," Carr said. A Skylab astronaut's recreational time was usually spent looking down at Earth. "From 200 nautical miles up, you could still see ocean currents and land-use patterns," Carr said. "But, as Ed Gibson (Skylab Four Science Pilot) said, you can't see boundaries between nations." Introducing himself as a "self-proclaimed space activist," Carr said a motivating factor for Skylab was that "people are going to have to learn how to live in space."